In the claims:

1. (Amended) A method, comprising:

(a) transferring a data payload from a host memory to a first memory of a network interface device;

(b) on the network interface device and before transferring of (a) is complete creating a pseudoheader and storing the pseudoheader in a second memory of the network interface device, the pseudoheader containing a header portion and a checksum portion, the checksum portion being a checksum of the header portion and not a checksum of the data payload;

(c) on the network interface device and before the transferring of (a) is complete transferring the pseudoheader from the second memory to the first memory;

(d) after (c) generating on the network interface device a checksum for data payload; wherein the pseudoheader and the data payload together comprise a pseudopacket; and

(e) reading the pseudoheader and at least a portion of the data payload from the first memory and combining the checksum for the header portion with the checksum from the data ~~portion~~ payload to generate a final checksum, the final checksum being inserted into the pseudopacket to form a complete TCP packet, the complete TCP packet being output from the network interface device to a network.

2. (original) The method of Claim 1, wherein the first memory is DRAM and wherein the second memory is SRAM.

3. (original) The method of Claim 1, wherein the second memory has a faster access time than the first memory.

4. (original) The method of Claim 1, wherein the network interface device is part of a host computer, the host memory being another part of the host computer.

5. (Amended) An apparatus, comprising:

(a) means for transferring a data payload from a host memory to a first memory of a network interface device;

(b) means for creating, before the transferring of (a) is complete, a pseudoheader and storing the pseudoheader in a second memory of the network interface device, the pseudoheader containing a header portion and a checksum portion, the checksum portion being a checksum of the header portion and not a checksum of the data payload;

(c) means for transferring, before the transferring of (a) is complete, the pseudoheader from second memory to the first memory;

(d) means for generating, after (c), a checksum for the data payload, wherein the pseudoheader and the data payload together comprise a pseudopacket; and

(e) means for reading the pseudheader and at least a portion of the data payload from the first memory and for combining the checksum for the header portion with the checksum for the data ~~portion~~ payload to generate final checksum, the final checksum being inserted into the pseudopacket to form a complete TCP packet, the complete TCP packet being output from the network interface device to a network.

6. (original) The apparatus of Claim 5, wherein the apparatus comprises a host computer, the network interface device being a part of the host computer, the host memory being another part of the host computer.

7. (original) The apparatus of Claim 5, wherein the means for reading includes a sequencer, and wherein the means for creating includes a processor.